Cirrhinus jullieni
Ecological Risk Screening Summary

Web Version – 10/31/2012

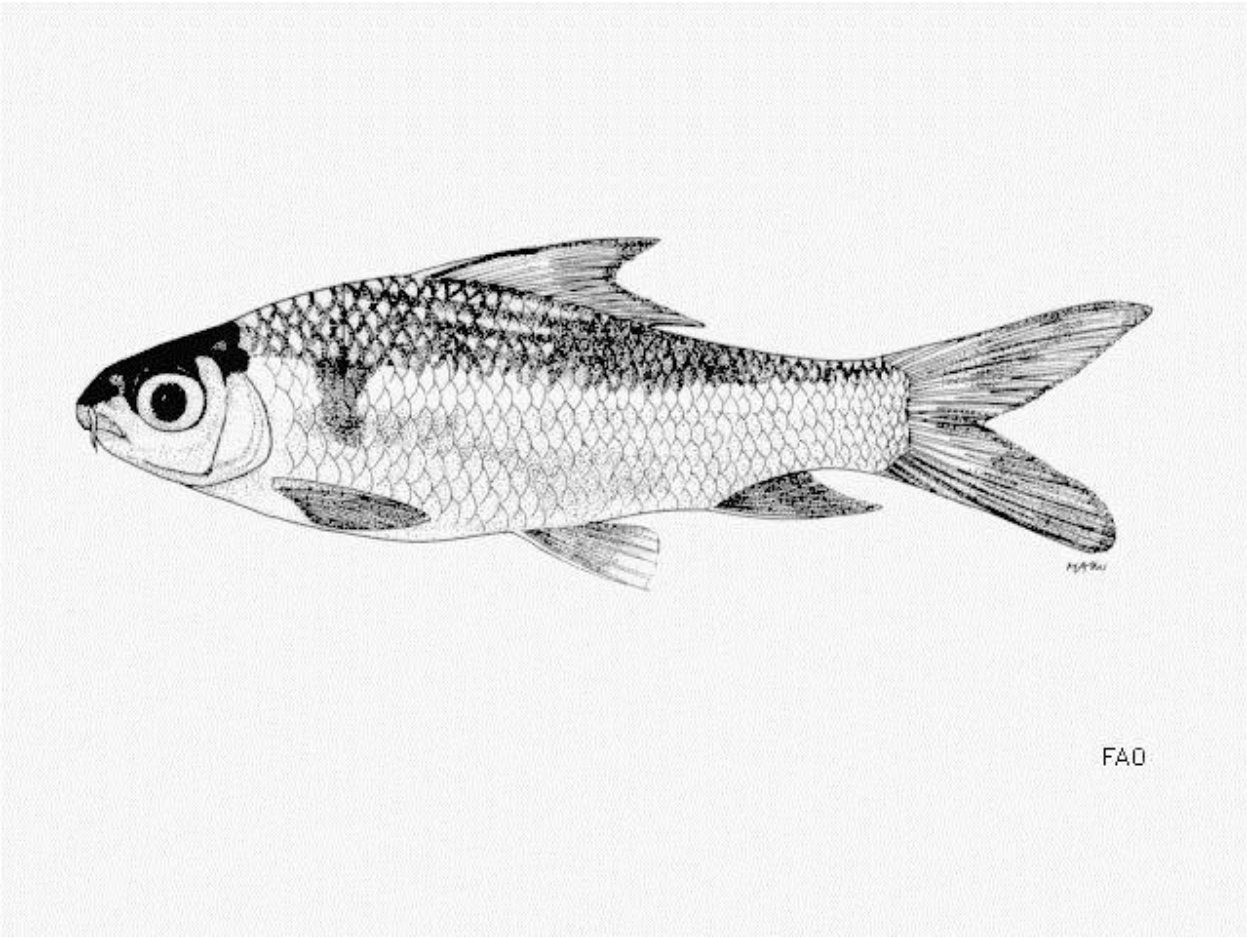

Photo: © FAO From EOL (2014).

1 Native Range, and Status in the United States

Native Range
From Froese and Pauly (2011): "Asia: Chao Phraya and lower Mekong basins."

Status in the United States
There are no known nonindigenous occurrences.

Means of Introductions in the United States

There are no known means of introductions.

Remarks

Based on Wu (1977) and Yue (2000), the Catalog of Fishes (Eschmeyer 2012), reports that the current status of *Cirrhinus jullieni* is: "Synonym of *Cirrhinus molitorella* (Valenciennes 1844). Cyprinidae: Labeoninae. Distribution: Asia. Habitat: freshwater." More research on this species is obviously needed.

2 Biology and Ecology

Taxonomic Hierarchy and Taxonomic Standing

From ITIS (2011):

Kingdom Animalia
Phylum Chordata
Subphylum Vertebrata
Superclass Osteichthyes
Class Actinopterygii
Subclass Neopterygii
Infraclass Teleostei
Superorder Ostariophysi
Order Cypriniformes
Superfamily Cyprinoidea
Family Cyprinidae
Genus Cirrhinus
Species *Cirrhinus molitorella* (synonym for *C. jullieni* (Eschmeyer 2012))

Current Taxonomic Standing: Uncertain

Size, Weight, Age

From Froese and Pauly (2011):

"Max length: 20.0 cm SL male/unsexed; (Roberts 1997**)**"

Environment

From Froese and Pauly (2011):

"Freshwater; brackish; benthopelagic; potamodromous (Riede 2004)"

Climate/Range
From Froese and Pauly (2011): "Tropical"

Distribution
From Froese and Pauly (2011): "Asia: Chao Phraya and lower Mekong basins."

Short description
From Froese and Pauly (2011):

"Dorsal spines (total): 0; Dorsal soft rays (total): 14-16; Vertebrae: 34 - 35. Predorsal profile relatively steep; rostral barbels well developed, length more than one-half eye diameter; maxillary barbels absent. Somewhat similar to the much larger species *C. molitorella*, from where it differs markedly in coloration. Also, it is deeper bodied, especially anteriorly, and has a larger, more falcate anal fin, the distal end of which extends posteriorly to below posteriormost scales on caudal fin (Roberts 1997); 13-14 branched dorsal-fin rays; 65-68 gill rakers on lower arm of first arch; faint dark blotch on body above pectoral fin; smooth upper lip, lower lip weakly papillate (Rainboth 1996). Body without reticulate pattern; pectoral, pelvic, anal and lower caudal lobe usually bright red (Kottelat 2001)."

Biology
From Froese and Pauly (2011):

"Inhabits midwater to bottom depths of rivers, occurring in the main stem and on the floodplains, including freshwater areas that undergo tidal fluctuation. Feeds on algae, detritus and occasionally benthic invertebrates. Often marketed fresh and used to make prahoc (Rainboth 1996)."

Human uses
From Froese and Pauly (2011): "Fisheries: commercial"

Diseases
None reported.

Threat to humans
From Froese and Pauly (2011): "Harmless"

3 Impacts of Introductions

There are currently no known impacts of introductions

4 Global Distribution

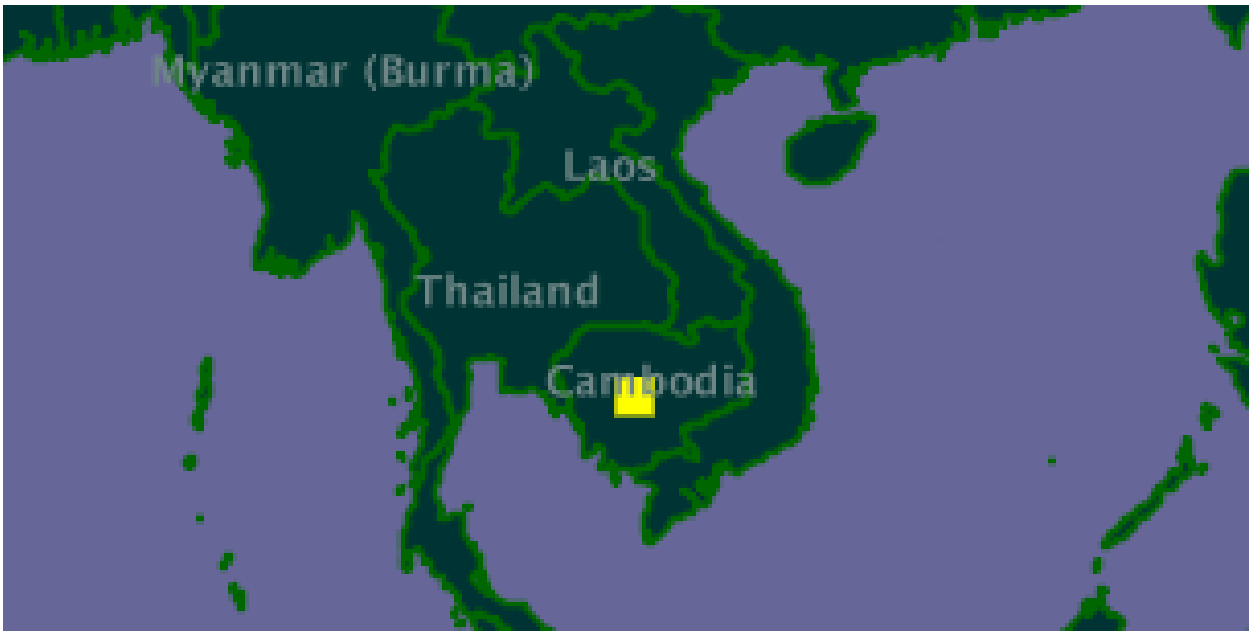

Figure 1 (above). Map of Asia showing occurrences of *Cirrhinus jullieni*. Map from GBIF (2011).

5 Distribution within the United States

No currently known distribution within the United States

6 CLIMATCH

Summary of Climate Matching Analysis

The climate match (Australian Bureau of Rural Sciences 2010; 16 climate variables; Euclidean Distance) was medium in Southern Florida and Southern Texas and low throughout the rest of the United States. Climate 6 match indicated that the Continental U.S. has a medium climate match. The range for a medium climate match is 0.005 - 0.103 and the climate match of *Cirrhinus jullieni* is 0.006 – Medium.

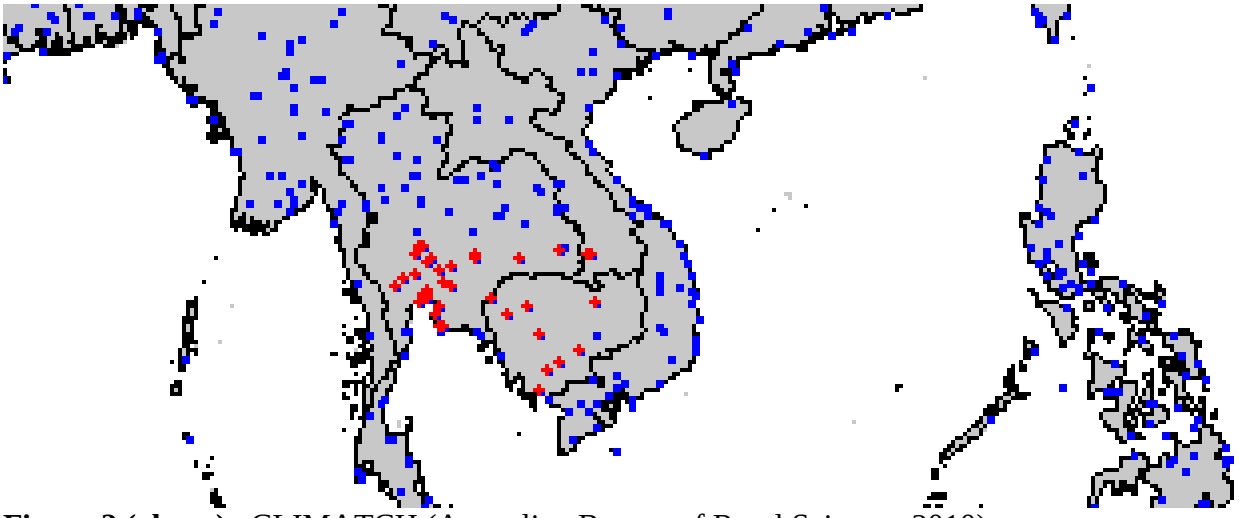

Figure 2 (above). CLIMATCH (Australian Bureau of Rural Sciences 2010) source map showing weather stations selected as source locations (red) and non-source locations (blue) for *Cirrhinus jullieni* climate matching. Source locations from GBIF (2011) and Froese and Pauly (2011).

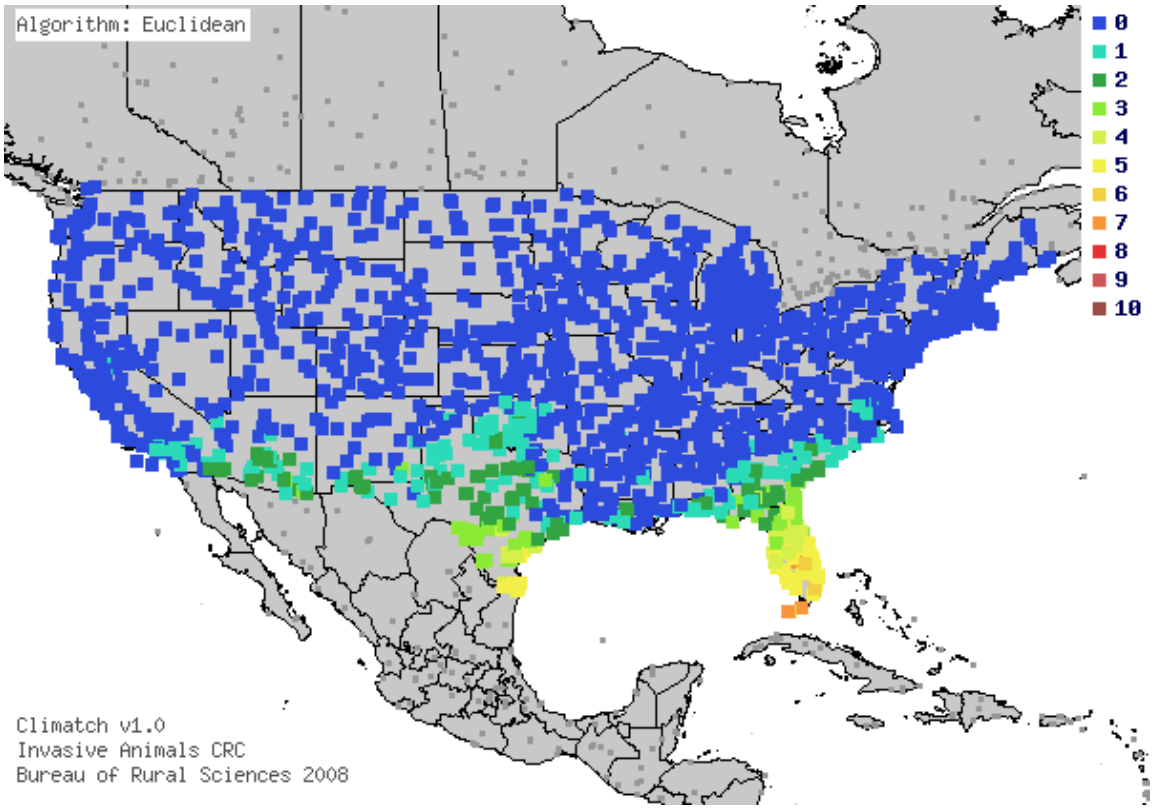

Figure 3 (above). Map of CLIMATCH (Australian Bureau of Rural Sciences 2010) climate matches for *Cirrhinus jullieni* in the continental United States based on source locations reported by GBIF (2011) and Froese and Pauly (2011). 0= Lowest match, 10=Highest match.

Table 1 (below). CLIMATCH (Australian Bureau of Rural Sciences 2010) climate match scores

CLIMATCH Score	0	1	2	3	4	5	6	7	8	9	10
Count	1512	180	116	57	40	42	8	3	0	0	0
Climate 6 Proportion = 0.006 (Medium)											

7 Certainty of Assessment

Peer-reviewed literature on the biology, ecology, and distribution associated with *Cirrhinus jullieni* as well as information on its potential invasiveness is extremely limited. More information and research on this species will be needed to strengthen the certainty of this assessment. The risk level is therefore uncertain, and the certainty of this risk is low.

8 Risk Assessment

Summary of Risk to the Continental United States

The overall risk assessment category for *Cirrhinus jullieni* is uncertain. This species is likely a synonym of *Cirrhinus molitorella*. However, more research is needed. *C. jullieni* has a medium climate match data in the United States and there is no history of invasiveness for this species.

Assessment Elements

- **History of Invasiveness (Sec. 3):** Low
- **Climate Match (Sec. 6):** Medium
- **Certainty of Assessment (Sec, 7):** Low
- **Overall Risk Assessment Category:** Uncertain

9 References

Note: The following references were accessed for this ERSS. References cited within quoted text but not accessed are included below in Section 10.

Australian Bureau of Rural Sciences. 2011. CLIMATCH. Available: http://adl.brs.gov.au:8080/Climatch/ (Accessed August 2011).

Encyclopedia of Life (EOL). 2014. *Cirrhinus jullieni*. Available: http://eol.org/data_objects/20901648. Photo license available: http://creativecommons.org/licenses/by-nc/3.0/legalcode. (September 2014).

Eschmeyer, W. N. (ed). 2012. *Cirrhinus jullieni*. Catalog of Fishes. California Academy of Sciences, Department of Icthyology. Available: http://research.calacademy.org/research/ichthyology/catalog/fishcatmain.asp (Accessed October 26, 2012).

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10 References Quoted But Not Accessed

Note: The following references are cited within quoted text within this ERSS, but were not accessed for its preparation. They are included here to provide the reader with more information.

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Rainboth, W.J. 1996 . Fishes of the Cambodian Mekong. FAO Species Identification Field Guide for Fishery Purposes. FAO, Rome, 265 p.

Riede, K. 2004. Global register of migratory species - from global to regional scales. Final Report of the R&D-Projekt 808 05 081. Federal Agency for Nature Conservation, Bonn, Germany. 329 p.

Roberts, T.R. 1997. Systematic revision of the tropical Asian labeon cyprinid fish genus *Cirrhinus*, with descriptions of new species and biological observations on *C. lobatus*. Nat. Hist. Bull. Siam Soc. 45:171-203.

Wu, H.W., R.D. Lin, Q.X. Chen, X.L. Chen and M.Q. He. 1977. Barbinae. Pp. 229-394. In: H.-W. Wu (ed.) Zhongguo like yulei zhi. [The cyprinid fishes of China] Volume 2. People's Press, Shanghai [ref. 12558]. v. 2. [In Chinese.]

Yue, P.Q. 2000 (Chief Ed.). Fauna Sinica. Osteichthyes. Cypriniformes III. Science Press. Beijing. 1-661. [Subfamilies are authored/edited by several authors.]